



VIEWPOINTS

Discussion of topical issues
in urban morphology

Brazilian urban morphology

Staël de Alvarenga Pereira Costa, Escola de Arquitetura/UFMG-Departamento de Urbanismo, Rua Paraíba 697 Sala 400, Bairro dos Funcionários, 30 130 140 Belo Horizonte /MG, Brazil. E-mail: spcosta@arq.ufmg.br

The contents of *Urban Morphology* have been conspicuous for the rarity of contributions from Latin America. However, the sizeable Brazilian presence at ISUF conferences would seem to belie any suggestion that this is a reflection of a lack of urban morphological research and practice in that part of the world. I should like to start the task of making up for the lack of significant contributions to the journal by sketching a few of the more significant features of urban morphological research and practice in Brazil.

There are two cognitive areas that deal with urban morphology in Brazil: human geography on the one hand and architecture and urbanism on the other. It should be borne in mind in this regard that a graduate student from a school of architecture in Brazil is also an urban planner. However, a number of researchers describe their work as 'urban morphology' when a more general term such as 'urban studies' might be more apposite – a point also made by Vilagrassa Ibarz (1998) in his discussion of the study of urban form in Spain. Nevertheless, the subject has a history in Brazil that extends over some 100 years.

Key researchers

The first studies were related to economic, social and political aspects of Brazilian urban forms, and were undertaken by historians, such as Buarque de Holanda (1995), and sociologists, such as Freire (1933) in the first half of the twentieth century.

Morphological studies were particularly

developed by architects strongly influenced by French and German architecture: for example by Lúcio Costa, who studied Portuguese influences on Brazilian architecture (Costa, 1995). These studies dealt with building typology in detail, giving attention to characteristics, dimensions, and technological details of the construction of buildings. At this time academics in the School of Architecture in Minas Gerais started to develop research that would nourish one of the strongest traditions – the study of the evolution of urban form and building typologies in the colonial towns of the state of Minas Gerais.

Sylvio de Vasconcellos, who worked with Lúcio Costa in the administrative section of the government heritage department, did especially important work. He presented typologies of the colonial towns in Minas Gerais, contributing to the understanding of both the evolution of the colonial villages of Minas Gerais and building typologies (Vasconcellos, 1956). From his findings conclusions could be drawn about the genesis of colonial urban settlements. His work, as well as Lúcio Costa's, can be considered as the starting point for a generation of studies that continues today.

Another member of the School of Architecture of Minas Gerais was Boltshauser, who developed studies on the interpretation of the growth of American towns, emphasizing the role of legislation in the formation and transformation of towns (Boltshauser, 1968). These, and the previously-mentioned studies, were the basis for the development of courses in the universities of São

Paulo, Bahia, Rio de Janeiro, Pernambuco, Rio Grande do Sul and Minas Gerais.

Modernism and the vicissitudes of research

The design of neighbourhoods and towns at the beginning of the twentieth century formed an important phase in the development of Brazilian urban form. It relates in major part to the construction of capitals of states. Garden city models were adopted as the basis for master plans and large residential developments in the main cities. The first decades of the twentieth century were also characterized by the urgent need for infrastructure and renewal projects involving the broadening of streets (Andrade and Magalhães, 1989; Manso, 2001).

The construction of Brasilia was a turning point in attempts to conceive and build towns following models of urban form based on a strong ideology. A modernist model was seen as one of the main intentions of urbanism, but mainly by the government. Those academics who were strongly influenced by the modernist ideology concentrated particularly on housing schemes.

Two main factors contributed to the search for new urban models. The first was the growth of the main cities. This obliged planners to pay attention to problems of providing infrastructure, particularly access to health and housing. The second was related to costs and the realization that for new cities to grow and multiply required large amounts of funding, which was hard to come by.

A crisis occurred in the second half of the 1960s. There was a decline in the amount of urban construction and a 'dark age' for researchers and academics in Brazil. The most prominent professors were barred from carrying out research. A few were able to continue teaching, but under strict supervision.

Urban design courses and their contribution to urban morphology

The decade of the 1980s brought a new era. Not only did researchers return to the schools of architecture but also courses for postgraduates began. Studies of building typologies recommenced, but new influences were at work. Notable among these were the postgraduate courses in Europe, Asia and the United States. In the United Kingdom, through the course at Oxford Brookes University, Ivor Samuels was a particularly

important influence. That influence has in large part been responsible for a new generation of urban morphologists in Brazil. For example, Vicente Del Rio (1995), Humberto Yamack (2003), Romulo Krafta (1986), and Staël Pereira Costa (2003) developed their work using urban morphology either in research or as a basis for design.

Ideas developed in this way began to be discussed in Brasilia University where a series of seminars on urban design was launched (Holanda, 2000; Kohlsdorf, 1986; Turkienicz, 1986). It brought to light what was going on in urban morphology in Brazil. Following the seminars, interesting contributions were made that opened up four different lines of investigation that continue as the main lines of research today.

The most traditional of these is historical studies. These had earlier been associated with the conservation of isolated monuments. But a broader and more urban vision of heritage conservation started in the last decades of the twentieth century (Castriota, 1998; Gunn, 1997; Reis Filho, 2000; Toledo, 1996).

The second group includes detailed analyses of the evolution of the population and the study of functional aspects of cities, mostly viewed in relation to politics and social problems. These considered issues raised by contributions from other disciplines, including sociology and economics (Marx, 1991; Vaz, 2002; Villaça, 1998).

The third research field is associated with the group initially co-ordinated by Carlos Nelson Ferreira dos Santos (1986). This stresses the importance of identifying the original layout of a settlement that has grown spontaneously. It advocates the laying out of streets in relation to topography and man-made features such as routeways. A related line of research concentrates on the effect of spontaneously-developed fabric on urban planning: it culminates in describing some of the most general morphological characteristics of favelas and squatter settlements. Pereira Costa (1986) and others tried to identify existing patterns so as to maintain the characteristics of a settlement so that tenants could continue in their accustomed environments (Bonduki, 1999; Magalhães and Ferraz, 2004).

The fourth line of research is concerned with the patterns of new urban forms, mainly the impact of the land subdivision process in the present landscape. Surveys have been undertaken of the products of urban land subdivision, such as the plots, open green spaces, and public parks. The studies of the 'landscape' group (Macedo, 1999) may be distinguished from corresponding analyses

in Europe, which draw attention to the third dimension, namely the building fabric on the street frontage. Nevertheless, the emphasis has similarities to that in urban morphological studies carried out by members of ISUF.

Conclusion

The Conzenian school of urban morphology (Whitehand, 2001) is not widely referred to in Brazil. Books by Aldo Rossi (1977) and Aymonino (1981), however, have been translated into Portuguese. The most frequently referenced work by those interested in urban form is a book dealing much more with architecture and urban theory than urban form (Lamas, 1993). There is a need, for the benefit of both academic research and planning projects, to translate the classical papers of urban morphology into Portuguese.

References

- Andrade, R.F. and Magalhães, B. de A. (1989) *Belo Horizonte: um espaço para a república* (Universidade Federal de Minas Gerais, Belo Horizonte).
- Aymonino, C. (1981) *O significado das cidades* (Presença, Lisboa).
- Boltshauser, J. (1968) *Noções de evolução urbana nas Américas* (Escola de Arquitetura da Universidade de Minas Gerais, Belo Horizonte) 2nd edn.
- Bonduki, N. (1999) *Origens da habitação social no Brasil - arquitetura moderna, lei de inquilinato e difusão da casa própria* (Estação Liberdade, Fapesp, São Paulo) 2nd edn.
- Castriota, L.B. (1998) *Arquitetura da modernidade* (Universidade Federal de Minas Gerais/Instituto dos Arquitetos do Brasil, Belo Horizonte).
- Costa, L. (1995) *Lúcio Costa: registro de uma vivência* (Empresa das Artes, São Paulo).
- Del Rio, V. (1995) *Introdução ao desenho urbano no processo de planejamento* (Pini, São Paulo).
- Freire, G. (1933) *Casa-Grande & Senzala: formação da família brasileira sob o regime de economia patriarcal* (Maia and Schmidt, Rio de Janeiro).
- Gunn, P. (1997) 'O paradigma de cidade-jardim na Vila Fabiana de reforma urbana', *Espaço e debates: revista de estudos regionais e urbanos* 17 (40), 11-27.
- Holanda, F. (2000) *O espaço de exceção* (Editora Universidade de Brasília, Brasília).
- Holanda, S.B. (1995) *Raízes do Brasil* (Companhia das Letras, São Paulo) 26th edn.
- Kohlsdorf, M.E. (1996) *A apreensão da forma da cidade* (Editora Universidade de Brasília, Brasília).
- Krafta, R. (1986) 'Desenho urbano e regulamentação urbanística', in Turkienicz, B. and Malta, M. (eds) *Desenho Urbano: Anais do II SEDUR* (Projeto, São Paulo) 19-25.
- Lamas, J. M. and Ressano, G. (1993) *Morfologia urbana e desenho da cidade* (Dinalivro, Lisboa).
- Macedo, S.S. (1999) *Quadro do paisagismo no Brasil* (Quadro do Paisagismo no Brasil, Faculdade de Arquitetura e Urbanismo, Universidade de São Paulo, São Paulo).
- Magalhães, S. and Ferraz, E.G.M. (2004) *Favela-Bairro: uma outra história da cidade do Rio de Janeiro* (Viver Cidades, Rio de Janeiro).
- Manso, C.F. (2001) *Goiânia: uma concepção urbana, moderna e contemporânea - um certo olhar* (C.F. Manso, Goiânia).
- Marx, M. de A. (1991) *Cidade no Brasil: terra de quem?* (Edusp/Fapesp, São Paulo).
- Reis Filho, N.G. (2000) *Contribuição ao estudo da evolução urbana do Brasil: 1500-1720* (Pini, São Paulo).
- Rossi, A. (1977) *A arquitetura da cidade* (Edições Cosmos, Lisboa).
- Pereira Costa, S. (1986) *O morro já tem vez* (Prefeitura de Belo Horizonte, Belo Horizonte).
- Pereira Costa, S. (2003) 'A morfologia urbana das cidades sul-metropolitanas do ciclo do ouro', unpublished report, Fundação de Amparo à Pesquisa do Estado de Minas Gerais, Belo Horizonte.
- Santos, C.N.F. (1984) 'Rio de Janeiro, o que transforma o que é transformado', in Projeto Editores Associados LTDA *I Seminário sobre Desenho Urbano no Brasil* (Projeto, São Paulo) 99-117.
- Toledo, B.L. (1996) *Ação dos engenheiros no plane-jamento e ordenação da rede de cidades no Brasil: peculiaridades da arquitetura e morfologia urbana* (Convento da Arrábida, São Paulo).
- Turkienicz, B. (1984) 'A forma da cidade. Agenda para um debate', in Projeto Editores Associados LTDA *I Seminário sobre Desenho Urbano no Brasil* (Projeto, São Paulo) 9-27.
- Vasconcellos, S. (1956) *Vila Rica: formação e desenvolvimento - residências* (Instituto Nacional do Livro, Rio de Janeiro).
- Vaz, L.F. (2002) *Modernidade e moradia: habitação coletiva no Rio de Janeiro, séculos XIX-XX* (7 Letras, Rio de Janeiro).
- Vilagrassa Ibarz, J. (1998) 'The study of urban morphology in Spain', *Urban Morphology* 2, 35-44.
- Villaça, F. (1998) *Espaço intra-urbano no Brasil* (Editora da Universidade de São Paulo, São Paulo).
- Whitehand, J.W.R. (2001) 'British urban morphology: the Conzenian tradition', in Scheer, B.C. (ed.) *Proceedings of the International Seminar on Urban Form, September 5-9, Cincinnati, Ohio, USA* (University of Cincinnati, Cincinnati) 207-10.
- Yamaki, H. (2003) *Iconografia londrinense. Mapas Iniciais 1930-1950* (Edições Humanidades, Londrina).